2

3

subsystem.

What is claimed is:

1	1. A fuel cell system comprising:				
2	a fuel cell subsystem comprising a fuel cell stack adapted to furnish power to a				
3	load;				
4	a battery;				
5	a first circuit adapted to connect the battery to the load when the fuel cell				
6	subsystem substantially delays in responding to a change in the power;				
7	a current sensor to indicate a current through the fuel cell stack; and				
8	a second circuit coupled to the current sensor to monitor cell voltages of the fuel				
9	cell stack, determine the minimum of the cell voltages and prevent the current from				
10	exceeding a maximum threshold current based on the minimum cell voltage.				
1	2. The fuel cell system of claim 1, wherein the first circuit is further adapted				
2	to disconnect the battery from the load when the fuel cell subsystem responds to the				
3	change.				
1	3. The fuel cell system of claim 1, wherein the fuel cell subsystem comprises:				
2	a fuel cell stack adapted to receive a hydrogen flow; and				
3	a fuel processor to produce the hydrogen flow.				
1	4. The fuel cell system of claim 3, wherein the fuel cell subsystem further				
2	comprises:				
3	a controller adapted to monitor the power and regulate a rate at which the fuel				
4 processor produces the hydrogen flow based on the monitored power.					
1	5. The fuel cell system of claim 1, wherein the first circuit is further adapted				

to connect the battery to the load based on a fuel cell stack voltage of the fuel cell

1	6. The fuel cell system of claim 1, wherein the first circuit comprises:				
2	a first diode to couple the battery to the fuel cell subsystem when a stack voltage				
3	of the fuel cell subsystem is near a predefined threshold voltage.				
1	7. The fuel cell system of claim 1, wherein the second circuit comprises:				
2	a voltage regulator adapted to regulate a stack voltage of the fuel cell stack and				
3	limit the current through the stack.				
1	8. A method comprising:				
2	using a fuel cell stack to furnish power to a load;				
3	connecting a battery to the load in response to the fuel cell stack substantially				
4	delaying when responding to a change in the power;				
5	monitoring a current through the fuel cell stack;				
6	monitoring cell voltages of the fuel cell stack;				
7	determining the minimum of the cell voltages; and				
8	preventing the current from exceeding a maximum threshold current based on the				
9	minimum cell voltage.				
1	9. The method of claim 8, further comprising:				
2	disconnecting the battery from the load when the fuel cell subsystem responds to				
3	the change.				
1	10. The method of claim 8, further comprising:				
2	monitoring the power;				
3	producing hydrogen;				
4	regulating a rate of the production in response to the monitoring; and				
5	providing the hydrogen to a fuel cell stack of the system.				
1	11. The method of claim 8, further comprising:				
2	connecting the battery to the load based on a fuel cell stack voltage of the fuel cell				
3	subsystem.				

1	12.	The method of claim 8, further comprising:		
2	connecting the battery to the load when a stack voltage of the fuel cell subsystem			
3	is near a predefined threshold voltage.			
1	13.	The method of claim 8, further comprising:		
2	using a voltage regulator to regulate a stack voltage of the fuel cell stack and limit			
3	the current through the stack			
1	14.	A fuel cell system comprising:		
2		a fuel cell subsystem adapted to measure a lowest cell voltage and further		
3	adapted to furnish power to a load, wherein the fuel cell subsystem is connected to the			
4	load through a diode;			
5		a fuel processor subsystem adapted to furnish reformate to the fuel cell		
6	subsystem; and			
7		a supplemental power subsystem adapted to furnish power to the load		
8	when the lowest cell voltage drops below a predefined threshold voltage, wherein the			
9	supplemental power subsystem is connected to the load through a diode.			
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1	15_	A fuel cell system comprising:		
2		a fuel cell subsystem adapted to measure a lowest cell voltage and further		
3	adapted to furnish power to a load, wherein the fuel cell subsystem is connected to the			
4	load through a diode;			
5		a fuel processor subsystem adapted to furnish reformate to the fuel cell		
6	subsystem;			
7		a supplemental power subsystem adapted to furnish power to the load		
8	when the lowest cell voltage drops below a predefined threshold voltage, wherein the			
9	supplemental	power subsystem is connected to the load through a diode; and		
10		a controller adapted to monitor the power and regulate a rate at which the		
11	fuel processor produces the hydrogen flow based on the monitored power.			

1	16.	The fuel cell system of claim 15, further comprising:
2		a predefined threshold voltage of -0.35 volts.
1	17,18.	The fuel cell system of claim 15, further comprising:
2		a predefined threshold voltage of more than -0.4 volts.
1	18 , 19.	The fuel cell system of claim 15, further comprising:
2	a pred	efined threshold voltage of more than -0.5 volts.